

DEVICE FOR AEROBIC EXERCISE**BACKGROUND OF THE INVENTION****1. Field of the Invention**

The invention relates to an exercise device, more particularly to a device for aerobic exercise.

2. Description of the Related Art

Figure 1 illustrates a conventional rigid board 1 used for aerobic step exercise.

Although the above-mentioned conventional step board 1 can achieve its intended purpose, the operation of the conventional board 1 is monotonous such that the functionality and effect thereof are limited.

SUMMARY OF THE INVENTION

Therefore, the object of the present invention is to provide a device suitable for performing different aerobic exercises.

According to the present invention, there is provided a device for aerobic exercise, which comprises:

a base frame; and
20 a resilient bladder body mounted on the base frame, the bladder body having a bottom wall disposed on the base frame and having a first rim, a curved surrounding wall with a second rim connected to the first rim of the bottom wall so as to define a fluid-receiving space, and a surrounding flange extending downwardly from the second rim of the curved surrounding wall and disposed to surround the base frame, the curved surrounding wall

having a top wall portion, and a curved surrounding wall portion connected to the top wall portion and formed with the second rim, the bladder body defining a first axis that passes through a center of the bottom wall
5 and along which the bottom wall has a width, and a second axis which passes through the center of the bottom wall and the top wall portion of the surrounding wall, which is transverse to the first axis and along which the curved surrounding wall has a maximum height less than the width
10 of the bottom wall, the top wall portion having a rigidity greater than that of the surrounding wall portion and less than that of the bottom wall.

BRIEF DESCRIPTION OF THE DRAWINGS

Other features and advantages of the present
15 invention will become apparent in the following detailed description of the preferred embodiments with reference to the accompanying drawings, of which:

Figure 1 is a schematic view illustrating a conventional board in a state of use;

20 Figure 2 is an exploded perspective view showing the first preferred embodiment of a device for aerobic exercise according to the present invention;

Figure 3 is an assembled perspective view of the first preferred embodiment;

25 Figure 4 is a schematic bottom view of the first preferred embodiment;

Figure 5 is a schematic sectional view of the first

preferred embodiment, taken along line V-V of Figure 4;

Figures 6 to 13 illustrate a series of exercises that can be performed using the first preferred embodiment;

5 Figure 14 is a partly exploded perspective view showing the second preferred embodiment of a device for aerobic exercise according to the present invention;

Figure 15 is a schematic sectional view of the second preferred embodiment; and

10 Figure 16 is a schematic sectional view of the third preferred embodiment of a device for aerobic exercise according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

15 Before the present invention is described in greater detail, it should be noted that like elements are denoted by the same reference numerals throughout the disclosure.

20 Referring to Figures 2 to 5, the first preferred embodiment for a device for aerobic exercise according to the present invention is shown to include a base frame 20, a resilient bladder body 10, a plurality of fasteners 30, and a plurality of pull cords 40.

25 The base frame 20 is adapted to be disposed on a plane 100 (see Figure 5). In this embodiment, the base frame 20 includes a looped outer frame portion 21, which is generally rectangular in shape and has rounded corners, and a plurality of reinforcing members 22 disposed in

and connected to the outer frame portion 21. The outer frame portion 21 is provided with a plurality of hooks 23, as best shown in Figure 2. The base frame 20 has a bottom side with a plurality of anti-slip pads 24 mounted thereon, as shown in Figure 4.

The bladder body 10, which is mounted on the base frame 20, has a bottom wall 11 disposed on the base frame 20 and having a first rim 110 (see Figure 5), a curved surrounding wall 12 with a second rim 120 (see Figure 10) connected to the first rim 110 of the bottom wall 10 so as to define a fluid-receiving space 14 for receiving a fluid, such as air or water, and a surrounding flange 13 extending downwardly from the second rim 120 of the curved surrounding wall 12 and disposed to surround the base frame 20. In this embodiment, the fluid-receiving space 14 is filled with air. Moreover, in order to enhance stability of the bladder body 10, the fluid-receiving space 14 may be additionally filled with an amount of liquid or sand (not shown). The curved 15 surrounding wall 12 has a top wall portion 121, and a curved surrounding wall portion 122 connected to the top wall portion 121 and formed with the second rim 120. The bladder body 10 defines a first axis (x) that passes through a center of the bottom wall 11 and along which the bottom wall 11 has a width (w), and a second axis 20 (y) which passes through the center of the bottom wall 11 and the top wall portion 121 of the curved surrounding 25

wall 12, which is transverse to the first axis (x) and along which the curved surrounding wall 12 has a maximum height (h) less than the width (w) of the bottom wall 11, as best shown in Figure 5.

5 In this embodiment, the bottom wall 11 is generally rectangular in shape and has rounded corners so as to complement the base frame 20. It is noted that the bottom wall 11 can also be circular or elliptical in shape, or can be square in shape with rounded corners. In this
10 embodiment, the maximum height (h) is less than a minimum width (w) of the generally rectangular bottom wall 11. The bottom wall 11 further has an outer surface 1100 formed with a plurality of treads 111 for enhancing the rigidity of the bottom wall 11, and a plurality of
15 receiving grooves 112 (only one is shown in Figure 5) for receiving the reinforcing members 22, respectively.

In this embodiment, the surrounding wall 12 has an outer surface 1200 formed with a plurality of rounded projections 123. The top wall portion 121 of the
20 surrounding wall 12 has a slightly convex outer surface 1212, which is a part of the outer surface 120, formed with a spiral reinforcing rib 1211, as best shown in Figures 2 and 3. Alternatively, the rounded projections 123 on the top wall portion 121 of the surrounding wall
25 122 may be formed with a higher density as compared to those on the surrounding wall portion 122. As such, the top wall portion 121 has a rigidity greater than

that of the surrounding wall portion 122 but less than that of the bottom wall 11.

The fasteners 30 fasten the surrounding flange 13 to the base frame 20.

5 Each of the pull cords 40, which are elastic, has one end hooked onto a corresponding one of the hooks 23 on the base frame 20, and the other end adapted to be pulled by a user during exercise.

Thus, the following exercises can be performed using
10 the first preferred embodiment of the present invention:

1. Referring to Figure 6, the user can stand on the top wall portion 121 of the surrounding wall 12 using one foot or both feet so as to perform balance training. Since the rigidity of the top wall portion 121 is greater
15 than that of the surrounding wall portion 122, a slight deformation of the top wall portion 121 occurs so as to result in a substantially a planar surface that permits the user to stand stably on the top wall portion 121.

20 2. Referring to Figure 7, the user can perform an aerobic step exercise.

3. Referring to Figure 8, the user's back can lie on the bladder body 10 so as to perform abdominal exercise for training of back and stomach muscles.

25 4. Referring to Figure 9, the user's waist can lie on the bladder body 10 during stretching of the user's muscles.

5. Referring to Figure 10, when the user sits on the bladder body 10 with both hands pulling upwardly the other ends of the pull cords 40, respectively, training of the forearm muscles can be attained.

5 6. Referring to Figure 11, when the user lies on the bladder body 10 with both feet pushing against the other ends of the pull cords 40, respectively, training of the leg muscles can be attained.

10 7. Referring to Figure 12, when the user lies on the bladder body 10 with both hands pulling upwardly the other ends of the pull cords 40, respectively, training of the arm muscles can be attained.

15 8. Referring to Figure 13, when the user stands on the bladder body 10 with both hands grasping the other ends of the pull cords 40, respectively, training of the arm muscles can be similarly attained.

Figures 14 and 15 illustrate the second preferred embodiment of a device for aerobic exercise according to this invention, which is a modification of the first 20 preferred embodiment. Unlike the previous embodiment, the base frame 20' has a curved top surface 25 formed with a plurality of anti-slip treads 251 (see Figure 15). The top surface 25 is slightly convex. The bottom side of the base frame 20' is configured with the 25 reinforcing members 27. The outer frame 21 has a bottom side with the anti-slip pads 28 mounted thereon.

Figure 16 illustrates the third preferred embodiment

of a device for aerobic exercise according to this invention, which is a modification of the second preferred embodiment. Unlike the embodiment of Figure 15, the base frame 20" has a substantially planar top surface 25'.

While the present invention has been described in connection with what is considered the most practical and preferred embodiments, it is understood that this invention is not limited to the disclosed embodiments but is intended to cover various arrangements included within the spirit and scope of the broadest interpretation so as to encompass all such modifications and equivalent arrangements.